Department of Veterans Affairs

Prevention Notes

From the Director's Desk

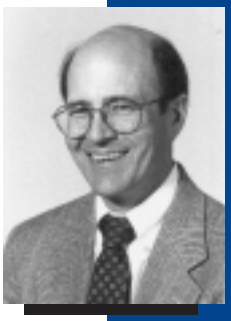
I hear this question often: Why do we have a VA National Center for Health Promotion (NCHP) and what does it do? The short answer appears in Public Law 102-585 that contains the enabling legislation for the NCHP:

- Provide a central office for monitoring and encouraging the activities of VHA with respect to the provision, evaluation and improvement of preventive medical services.
- Promote the expansion and improvement of clinical, research and educational activities of the VHA with respect to such services.

The larger challenge for the NCHP is to create a vision of an ideal health program that helps veterans achieve their maximum health potential. Here is a description of how the NCHP has responded.

I. Organizational Benefits of the NCHP

From birth to death, in health and illness, everyone can benefit from preventive medicine. Preventive healthcare is essential to achieve the VA "Ten for 2002" Strategic Target # 4: *Exceed by 10% the proportion of patients of other large healthcare providers who achieve maximal functional potential.*[1] Preventive services must be included in any VA program that will achieve the dual mission goals of *Excellence in Healthcare Value*, and *Excellence in Service as Defined by Customers.*[2] The NCHP represents the sole resource in VHS dedicated to helping Networks incorporate preventive medicine in their efforts to reach these goals.



The science underlying preventive care services is advancing at a rapid pace. Research studies published in professional journals simultaneously appear in lay media thus stimulating high expectations among consumers. In this environment, health professionals must remain on the cutting edge of technology to retain the respect of their patients. Keeping a large health program "on track" requires distinguishing proven strategies from those without merit. Since there are very few certified Preventive Medicine specialists working at VA field sites, it is vitally important to provide the VA with a national resource that supports practicing clinicians and guides VA policy.

II. Origins of the NCHP

The VA moved beyond individual clinician initiative in June 1979 with the passage of Public Law 96-22 creating the VA "Preventive Health Care Pilot Program." This led to the formation of a Preventive Health Care Task Force at VA Central Office and in 1985 to the creation of the Preventive Medicine Field Advisory Group (PMFAG). Every VA facility was required to appoint a Preventive Medicine Program Coordinator (PMPC) to monitor services, report on program success, and serve as liaison with Central Office. The VA National Health Promotion Agenda was first published in VA Manual M-2, Part IV, Chapter 9, dated September 11, 1991. This publication established the tradition of evidence-based recommendations for all health promotion strategies for veterans.

The passage of Public Law 102-585 in 1992 created the NCHP and specified it be located at a Department Health Care Facility. Following a national competition, the Durham VAMC was selected to host the Center. In 1995, the NCHP assumed responsibility for VA health promotion and disease prevention activities. The NCHP Director reports to the Chief Consultant in Primary and Ambulatory Care. The PMFAG counsels the Chief Consultant and serves as an informal Board of Advisors for the NCHP.

III. What Does the NCHP Do for the VA?

Based on medical evidence, the NCHP recommends selected prevention services to recommend for veterans and publishes them in a *Handbook* distributed to VHA clinicians. The NCHP takes care that recommendations synchronize with other VHA endeavors to avoid presenting conflicting requirements to VA clinicians. The *Handbook* assures veterans that a uniform package of services is offered at all VA facilities nationwide.

Between biennial editions of the *Handbook*, the NCHP staff prepare Directives for the Under Secretary for Health to guide clinicians about emerging issues. Examples in the recent past dealt with Mammography and Prostate Cancer Screening. By this means, the prevention services for veterans are kept in step with the latest available information.

The NCHP recommendations are posted on a VA Web page to encourage veteran and general public access. Those viewing the information are welcome to contact the NCHP for further clarification. The NCHP staff answer questions and help direct veterans to receive services at facilities near where they live and work.

Continued on page 3

Inside this issue . . .

Summer 1999 Vol. 4 #2

National Center For NCHP HEALTH PROMOTION

Editor's Notes

Handbook

The revised NCHP *Handbook 1120.2* is now available and being distributed to the field. A fax or electronic copy has been sent to each health care facility and VISN office and followed up with five printed copies to the Publications Control Officer (PCO) at each site. We have also requested that a copy be sent to each medical center library. The *Handbook* is also available on the web at the following sites: Internet: <www.va.gov/publ/direc/health> and Intranet:<vaww.va.gov/publ/direc/health/>.

National Conference Planned for Fiscal Year 2000

We have just received word that the proposal for a fourth annual conference in prevention has been partially funded. The meeting will be held in the second quarter of Fiscal Year 2000 (January - March). The conference has no registration fee. Individuals who wish to attend must request travel funding from their facility and/or VISN. Detailed information on the conference and educational sessions will be included in the Fall issue of *Prevention Notes*. Information on registration packets, hotel, and other related topics will be provided in the future.

Building on existing health promotion and disease prevention activities, the conference will focus on educating and motivating facility staff and Network representatives in developing proven and effective prevention delivery models of care for veterans. Unique to next year's program will be the inclusion of "best practice" models as evidenced by Veterans Health Survey and recent External Peer Review Program (EPRP) ratings. Workshop sessions are intended to empower VHA staff in the development and implementation of successful prevention strategies.

PMFAG Solicits Information From VISNs Regarding National Meeting

Preventive Medicine Field Advisory Group (PMFAG) members polled the Clinical Managers in the 22 VISNs to determine which type of educational activity would benefit them most. The meeting was strongly endorsed by all reporting VISNs. Some managers indicated that the annual meeting is the sole opportunity for a face-to-face network-wide planning meeting for staff from the various facilities. All favored the notion of presenting "successful strategies" in prevention: there is a need to know what works and what does not in the clinical setting. "Best Practices" should include VA as well as non VA models of care and document local elements that make them successful, and are exportable to other settings. Interviewees stressed that the sessions be practical, specific and explicit with a focus on information instead of theory.

PACE Manuals

Delays occurred within the Department of Health and Human Services related to the release and printing of the *PACE (Patient-Centered Assessment and Counseling for Exercise and Nutrition)* manuals discussed at last year's prevention conference: "Integrating Prevention and Education." The manuals are available now and will be distributed to each VA Medical Center library. We appreciate your patience.

Preventive Medicine Coordinators (PMC) Conference Call Highlights

A nation-wide conference call was held May 26, 1999. Eighty-eight health care staff either working in or interested in prevention participated in the call. The following items were discussed.

- Dr. Ron Gebhart, former Chief Consultant, Primary/Ambulatory Care, has accepted a position as Chief of Staff in Salt Lake City. Dr. Robert Frame, Assistant Undersecretary for Dentistry, has been appointed Acting Director until the position is filled.

  Dr. Rob Sullivan is stepping down as Director of the National Center for Health Promotion in July. A new leader is being recruited for the program.

  Dr. Sullivan attended the "Prevention 99" conference, sponsored by the Association of Teachers of Preventive Medicine and the American College of Preventive Medicine in April. People from a variety of prevention activities across the nation, including state and local health departments as well as private corporations and non-profit organizations shared experiences, dealing with issues of preventive medicine. Dr. Kizer accepted an award in recognition of VA success in the delivery of preventive services to veterans.
- The 1999 Veterans Health Survey (VHS) data collection has been completed. There was a response rate of 67%. Facility-specific results and summaries for VISNs and the VA as a whole will be distributed to the field by the end of July.
- Every facility should know the point of contact for the Publications Control Officer (PCO). That individual keeps a file copy of all headquarters-approved publications. Please contact your local PCO or individual within your local VISN to obtain copies of materials mentioned on the call.
- CDC launched a major initiative to prevent colorectal cancer. Download materials from the web site at <www.cdc.gov/cancer/screenforlife>.(see announcement, p. 3)

More detailed minutes of the call will be distributed to Preventive Medicine Program Coordinators (PMPCs) and Preventive Medicine Network Coordinators (PMNCs) in the near future via Microsoft Exchange. In the meantime, if you have any questions regarding the content of the call, contact Mary Burdick at the National Center **919.416.5880 ext. 227**.

FlexSure OBT Test

A question related to the *FlexSure OBT* test for fecal occult blood was raised on the call. Dr. Verona Hegarty, Assistant Director for Research, NCHP prepared the following in response to the inquiry.

Stool tests to detect fecal occult blood may be either guaiac-based (such as Hemoccult) which detects the peroxidase-like activity of heme in hemoglobin or immunochemically-based (such as *FlexSure OBT*) which detects the globin moiety of hemoglobin. Because globin from the upper gastrointestinal tract can be degraded by upper intestinal enzymes, immunochemical tests will only detect lower gastrointestinal bleeding. Consequently, using an immunochemically-based test can be clinically useful in detecting lower gastrointestinal bleeding in persons who may have some upper gastrointestinal bleeding, e.g., persons taking non-steroidal anti-inflammatory drugs.

Regarding which type of test should be used in screening for colorectal carcinoma as recommended in *Handbook 1120.2*, the United States Preventive Services Task Force (USPSTF) at their meeting on May 24th and 25th 1999 debated a similar issue in relation to different tests which are available to detect cervical dysplasia. The issue is still under discussion by the USPSTF and centers on whether or not national policy ought to advocate for a specific pharmaceutical product when there are other similar products on the market. *FlexSure OBT* is only one of the currently available immunochemically-based tests for fecal occult blood testing. While we await the recommendations and guidance of the USPSTF in this issue, the matter of which fecal occult blood test to use should be determined by the preferences of the health care provider, the preference of the patient and the test availability from local VAMCs. All of them satisfy existing *VHA Handbook* recommendations.

The next call for the **Preventive Medicine Coordinators will be held Tuesday, October 5, 1999 at 1:00 pm ET; 12:00 pm CT; 11:00 am MT; 10:00 am PT; and 9:00 am AT**. The call in number is: **800.767.1750** and ask for the Preventive Medicine Coordinators call. Suggested agenda items may be sent to Dr. Mary Burdick.

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From the Director's Desk

Continued from page 1

The NCHP staff maintain constant surveillance for emerging health promotion strategies appearing in the literature. When a breakthrough occurs, the information is promptly distributed to VA clinicians for implementation. Knowledge of current preventive medicine science permits the NCHP staff to respond to daily questions posed by VA practitioners as they address patient care issues, and by facilities and Networks as they establish patient care policies.

The NCHP monitors health promotion program outcomes via the Veterans Health Survey which is sent to a stratified random sample of those receiving primary care in VA clinics. The survey data are correlated with medical record information assembled by the VA Office of Performance and Quality through the External Peer Review Program (EPRP). The data permit the NCHP to determine models of "best practice" to be featured in NCHP education programs for emulation nationwide.

The NCHP education activities present VHA practitioners with multiple ways to stay informed of progress in preventive medicine. Publication of a quarterly newsletter; national meetings featuring renowned leaders in the field; televised presentations on emerging issues; and quarterly conference calls to Preventive Medicine Coordinators, to which Patient Health Education staff and others interested in preventive medicine are invited, as well as periodic telephone conferences, all encourage the dialogue between field staff and NCHP leadership regarding VHA policy, and the latest preventive medical care innovations.

The NCHP supports VA facility management in maintaining certification. Those participating in the Joint Commission on Accreditation of Health Care Facility (JCAHO) review turn to the NCHP for documents and activities in fulfillment of accreditation requirements. Networks participating in the National Committee on Quality Assurance (NCQA) review report that NCHP activities and documents are invaluable in the review process.

Network leaders use data from the NCHP Veterans Health Survey to compare performance with other networks and to benchmark national healthcare organizations. Network staff consult the NCHP for assistance in preventive care program design. Clinical Managers rely upon the NCHP to track innovations and keep facility clinicians aware of current developments.

VHA headquarters staff frequently consult the NCHP for guidance about Preventive Medicine policy issues. Preparation of prompt responses to congressional inquiries about preventive care strategies is an ongoing obligation. Since Congress is subject to pressure by special interest groups, the NCHP responses provide a balanced and impartial review founded on the scientific evidence that is essential for good legislation.

The VHA reap substantial benefits from NCHP staff involvement in national forums for Preventive Medicine. As the largest organized healthcare system in the Unites States, it is important that VHA representatives participate in deliberations on national policy. The NCHP provides liaison with numerous governmental and non-governmental bodies in addressing health promotion issues. Through such contacts, the VHA can influence the course of events shaping healthcare throughout the Unites States. Simultaneously, NCHP representatives return with advance knowledge of trends and events that will prove to be important to veterans.

The NCHP provides support for the Secretary of Veterans Affairs by preparing the annual Congressional Report on Preventive Services for Veterans. Using data from the Office of Quality and Performance and data from the Veterans Health Survey, the NCHP furnishes the documentation required by Public Law 102-585.

NCHP staff is active in research. Presentations at national meetings, and publications in peer-reviewed journals signify the NCHP commitment to advancing the science of health promotion by capitalizing on the unique resources of the Department.

The most valued contribution by the NCHP is in creating a vision for VA health care. After consulting national experts and leaders in the field of disease prevention and health promotion, the NCHP developed a strategic plan to help every veteran enrollee achieve the maximum possible health potential. The adoption of healthy personal behaviors linked with a program of preventive medical care services is essential. The focus is on assisting veterans to modify lifestyles that contribute to premature morbidity and mortality. Education programs provide VHA staff with support, knowledge, skills, and attitudes to enable veteran behavior change. The intent is to alter VHA corporate culture and place health promotion on an equal footing with illness care.

IV. Challenges for the NCHP In Years To Come

The NCHP must find ways to maintain interest in prevention services in the face of budgetary limitations and continuing operating system revisions. The merger of national VA policy with Network interests will continue to present challenging issues. The Information Office must find ways to enhance preventive care data capture to enable the implementation of clinical reminders and to tabulate prevention services. VA research must pursue new approaches to motivate veterans to keep themselves healthy and help VHA clinicians assist them in that quest. The NCHP will continue to promote the merger of Health Promotion Program Handbook recommendations with Network Directors Performance Agreements to resolve clinician uncertainty regarding VHA health promotion policy. Creative ways are needed to educate staff and extend the value of national meetings beyond those able to attend. These are some of the challenges the NCHP staff will address in the years to come.

V. Summary

This summary of the NCHP vision, mission, and challenge provides a response to those asking about our program. The NCHP staff will welcome queries about preventive medicine strategies, VHA programs, and issues on the cutting edge of health promotion and disease prevention.

[1] *Journey of Change*, Department of Veterans Affairs, Washington DC, April 1997, page 8

[2] Ibid. p.32

Robert J. Sullivan Jr. MD, MPH
Director, National Center for Health Promotion and Disease Prevention

Screen for Life –The National Colorectal Cancer Action Campaign

A new communications campaign now being launched aims to raise awareness of colorectal cancer, the second-leading cause of cancer-related deaths in the United States. CDC collaborated with the Health Care Financing Administration and the National Cancer Institute to develop "Screen for Life" to encourage screening for colorectal cancer among people aged 50 years or older. State health departments are encouraged to join in the effort. To find out more information about the national campaign, visit the Web site at <http://www.cdc.gov/cancer/screenforlife>, or contact the campaign manager, Brian Southwell, Communication and Behavioral Sciences Branch, Division of Cancer Prevention and Control, NCCDPHP, CDC, Mail Stop K-48, 4770 Buford Highway, NE, Atlanta, GA 30341-3717; 770/488-3250.

United States Preventive Services Task Force Meeting Report

The current United States Preventive Services Task Force (USPSTF) met at Airlie House, Warrenton, Virginia, May 24-25, 1999. In addition to the members of the task force, the meeting was attended by Agency for Health Care Policy and Research, Evidence-Based Practice Center members and liaisons from professional societies and federal agencies.

The Veterans Health Administration (VHA) liaison office with the USPSTF is the National Center for Health Promotion (NCHP). The benefits to VHA of having a representative from the NCHP in attendance at the USPSTF meetings include the transmission to VHA of information about the issues under consideration by USPSTF; exchange of information with other liaisons to USPSTF including Centers for Disease Control, Canadian Task Force on Preventive Health Care, American Academy of Family Physicians, American College of Obstetricians and Gynecologists, American College of Physicians, American College of Preventive Medicine, National Institutes of Health and the U.S. Army Center for Health Promotion and Preventive Medicine. The following is a summary of some of the major topics addressed by the task force at the meeting.

Methodology for Assessment of Evidence

The methods work group of the USPSTF believes that evidence needs to be analyzed from a number of perspectives. These include evidence from an individual study, grading the quality of evidence for a linkage in an analytic framework, and grading the evidence for an entire preventive service. In regard to the latter, Dr. Cynthia D. Mulrow, M.D., M.S., from the Audie L. Murphy Memorial Veterans Hospital, San Antonio, Texas developed and proposed to the task force members a new grading system for evaluating an entire preventive service. Her proposal was overwhelmingly approved by other task force members and will be used by them in their decision-making process.

Cost-Effectiveness of Clinical Preventive Services

The difficulties in determining the cost-effectiveness of clinical preventive services were delineated by representatives of the Committee on Clinical Preventive Services. This committee was convened by the Centers for Disease Control, the Health Care Financing Administration and Partnership for Prevention. The committee undertook to assess available evidence on the effectiveness, costs and impact of clinical preventive services and to identify preventive services which ought to have the highest priority in the presence of limited time and resources. The task force discussed the implications of this project for their plan to include cost-effectiveness in the next USPSTF report.

Screening for Skin Cancer

Evidence for this test has been reviewed by a work group from the task force. The findings were presented and it was decided that the task force will now move to working on a policy recommendation regarding screening for skin cancer, which will be reviewed at the next task force meeting.

Screening for Lipid Abnormalities

Work for the task force on analyzing the evidence for screening of lipid abnormalities is ongoing at the Evidence-Based Practice Center at the Research Triangle Institute, Raleigh, North Carolina and the University of North Carolina. Much of the discussion on this topic centered on the differences in evidence for screening of asymptomatic persons versus screening in those at high risk of having lipid abnormalities, e.g. persons with diabetes mellitus.

Screening of Men and Women for Chlamydial Infection

Work for the task force on analyzing the evidence for screening of men and women for chlamydial infection is ongoing at the Evidence-Based Practice Center at the Oregon Health Sciences University. There was general agreement among members of the task force that this screening is both effective and cost-effective on a population level. It is probable that screening of sexually-active asymptomatic men and women for chlamydial infection will be a recommendation of the task force.

Depression Screening

Work for the task force on analyzing the evidence for screening for depression is ongoing at the Evidence-Based Practice Center at Research Triangle Institute and the University of North Carolina. The task force discussions emphasized the importance of analyzing the evidence for the benefit of this screening measure separately for specific age groups, from childhood to older adults.

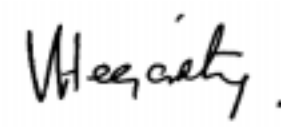
Vitamin Supplementation

The evidence for the benefits of supplemental vitamins A, C, E, folate, multivitamins and beta-carotene in prevention of cancer and coronary heart disease is under review by the Evidence-Based Practice Center at Oregon Health Sciences University. Much of the task force discussion on this subject centered on the appropriateness of the supplements under review and the potential benefit of expanding this review to include other supplements including minerals.

Shared Decision-making

The subject is under review by the methods work group of the task force. There will be a section in the task force report which will deal with shared decision-making. The discussion centered on the definition of shared decision-making and the task force did not agree with a proposed definition because it failed to address adequately the overall societal benefit of this intervention. The task force emphasized that it's recommendations will be based on the societal benefit of specific preventive services and more work on this subject is underway by the methods work group.

(The VHA has recently published the *Shared Decision-making Notice, VHA Notice 99-02, June 15, 1999*).



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Improving Performance in FOB Screening for Colorectal Cancer

Annual Fecal Occult Blood Testing (FOBT) for patients aged 50 and older is recommended by VA prevention guidelines for detecting early, asymptomatic colorectal cancer or its precursor, adenomatous polyps. An alternative screening method, flexible sigmoidoscopy, is used less due to staff limitations or patient reluctance. These screening methods reduce colorectal cancer mortality rates by 30 to 50% respectively, with benefits starting five or more years after screening.

Several aspects hinder the ordering of FOBT tests for appropriate outpatients, including, a) not identifying eligible individuals, b) focusing the clinic visit on other patient needs, or, c) giving inadequate attention to patient beliefs or motivation. Tactics to address these obstacles include reminders,[1] use of triage nurses, and patient education. Once a FOBT test has been offered, the main determinant of screening effectiveness is patient cooperation in completing and returning tests.[2] Clinic FOBT completion rates vary from 20 to 50%, with reported factors including the complexity of the diet regimen and collection process, fear of cancer, or fatalism about the future.

A recently conducted study in the general medicine clinic at the Seattle Division, VA Puget Sound, illustrates several methods intended to improve the performance of FOBT testing. First, the clinician staff chose ways to improve overall prevention levels with several steps. It delegated selected screening activities (ordering lipid panels or FOBT tests, performing needed immunization, referral for mammograms or Pap smears) to triage nurses or other clinic staff, using the VA guidelines to identify target groups and periodicity. Second, the nursing staff concurred that these were appropriate tasks, which were feasible to add to their existing tasks. Finally, to help clinicians identify prevention needs, a one page self-administered Health Promotion form was devised for the patient to complete after registering for the visit.

As a further step, in January-March, 1998, a study was designed to assess FOBT ordering levels after delegating this task to triage LPNs. While collecting vital sign information, LPNs were trained to use protocols to propose FOBT tests to 50-69 year old individuals who reported no FOBT within the past year or no sigmoidoscope examination within five years. In addition to the patient reports, the VA computer system was used to generate a list of 50-69 year old patients who appeared to be eligible for FOBT testing. It was useful when patients were uncertain or to arbitrate actual dates of VA-based FOBTs or sigmoidoscopy. The LPN was asked to explain the purpose of the screening, the technique of using the Hemoccult card, and the possibility of further testing if a positive test occurred. If a patient agreed, the LPN then circled the FOBT order on the encounter form. The care provider could countermand this order during the subsequent visit as inappropriate or unnecessary, based on other considerations. Results in the intervention firm were compared with the other clinic firm, where LPNs did not order FOBT tests.

The major findings of the study were:

50-69 year old outpatient FOBT screening in 2 VA firms

	Usual Care	LPN Intervention
Eligible	354	361
Ordered	19%	72%
Returned FOBT	48%	44%
Positive Tests	8%	

The results of the study conclude that in clinics where there is multi-disciplinary staff involvement and roles and tasks clearly defined and accepted, prevention performance can be improved. Given the increased FOBT rates with LPN-initiated testing, other findings are interesting.

1. Of patients eligible for testing, only 3% refused the LPN order. Given that half of patients failed to return FOBT cards, this may indicate we overlooked or failed to sufficiently address potential patient objections to FOBT testing.
2. Clinicians countermanded only 6% of the patient FOBT orders. The likelihood of undetected screening done outside the VA was reduced by the patient questionnaire. The average age (60 years) in this 50-69 year old sample may have reduced patients with a life expectancy of less than 5 years
3. 95% of completed cards were returned within 6 weeks. If reminder cards were attempted at 4-6 weeks, most non-compliant patients could be identified.
4. LPN workload and willingness affects the feasibility of adding prevention protocols to their current activities. In this study, almost one-third of eligible patients did not receive offers of colorectal cancer screening. When FOBTs were undertaken, they did not detract from other prevention actions: interventions by LPNs working in the firm also performed vaccinations at 3-4 times the rate of the comparison firm.
5. While this intervention tripled the rate of FOBT ordering, it raises additional issues for improving patient use of FOBT testing.
   a. We do not know enough about patient attitudes and receptivity towards FOBT screening.[3] We fail to recognize persons unlikely to comply – are there key markers which might help (e.g., no previous FOBT; living alone). Are there effective ways to deliver patient education, given the clinical realities of time and staff constraints?
   b. Patient education materials which only “give the facts” do not seem to help motivate individuals. Is there an effective, briefly written handout deserving wider distribution?
   c. The apparent low rate of refusal may be related to time constraints of busy LPNs. Who has time to probe and offer counterarguments which deal with patient concerns or misconceptions? Further work with LPNs is essential to clarify tactics.
   d. Current recommendations about dietary limitations may seem so daunting that many patients give up on the process. What are the trade-offs between strict diets during testing and false positive rates? Are more selective FOBT tests the answer?

[1] Litzelman DK, et al. Requiring physicians to respond to computerized reminders improves their compliance with preventive care protocols. J Gen Med 1993: 8: 311-317.

[2] Lieberman DA. Cost-effectiveness model for colon cancer screening. Gastro 1995: 109: 1781-1790.

[3] Winawer SJ, et al. Colorectal cancer screening: Clinical guidelines and rationale. Gastro 1997: 112: 594-662

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Primary and Secondary Prevention of Cardiovascular Disease: A Case-Management Model Program

Cardiovascular disease (CVD) remains the number one cause of death in the United States accounting for nearly half of all deaths among both men and women. Despite major successes of the past 30 years, unfavorable trends in some coronary risk factors may have contributed to a slowing of the rate of decline in age-adjusted cardiovascular disease mortality in the United States. Furthermore, given the aging of the population, cardiovascular disease will remain a major public health concern well into the next century even if age-adjusted death rates continue to decline. Indeed, early in the next century cardiovascular disease will be the number one killer world wide.

The public health importance of both primary and secondary prevention of cardiovascular disease is therefore obvious. During the past several decades, researchers have made great strides in identifying lifestyle, biochemical and genetic factors affecting risk of developing coronary heart diseases (CHD). However, the process of disease prevention involves not only understanding disease mechanisms and identifying risk factors but also establishing intervention strategies that will reduce risk. Weighing the benefits of any given intervention against the risks and costs has led to the establishment of guidelines for health providers and the general public. Implementing these guidelines remains a difficult task. Current evidence strongly supports a role of risk factor modification for both primary and secondary prevention of CHD.

Given the demographics of the Veteran population, the management of cardiovascular disease will continue to be a major source of resource consumption for VHA. Primary and secondary prevention of cardiovascular disease and events could even yield savings in the future. At the VA Boston Healthcare System Brockton and West Roxbury campuses we have developed a case management model primary and secondary prevention program. The program includes inpatient cardiovascular risk assessment and development of prevention prescriptions as well as an extensive outpatient program to assist in the screening for and modification of cardiovascular risk factors. Resources are allocated according to a classification scheme outlined below which prioritizes risk factors based on both the evidence that a given factor increases the peril of subsequent events as well as well as cost efficacy of the intervention.

The program serves as a focal point for the intensive risk factor modification that should be undertaken among high risk patient as well as support for primary care providers who are responsible for lower cost interventions in lower risk groups of patients. The program brings together resources from a number of departments including cardiology, cardiac surgery, rehabilitation medicine, ambulatory care, nutrition, pharmacy, and nursing. We hope to foster an integration of cardiovascular prevention activities between the tertiary facility and all facilities in the VA New England Healthcare Network.

Classification of Interventions for Modifiable Risk Factors

The American College of Cardiology at its Bethesda Conferences categorized risk factors into four categories based on the likelihood that modification of the risk factor will result in lower risk. In adapting this useful classification scheme to clinical practice requires cost efficacy to be considered. At the VA Boston Healthcare System we have developed a modified classification scheme for interventions for major modifiable risk factors associated with cardiovascular disease based on not only the strength of the association and the evidence of benefit of intervention but also the cost efficacy of intervention. Preventive interventions for modifiable risk factors for cardiovascular disease can be divided into three main categories (Tables 1, 2, and 3). Class I interventions (Table 1) have a clear causal relation to heart disease, and good data generally from trials are available on the magnitude of benefit of intervention as well as its risks and costs. There are several instances where an intervention has proven efficacy in secondary prevention, but data are not yet available to support that intervention in primary prevention. Cigarette smoking, hypercholesterolemia, and hypertension are casually related to risk of CHD events, and the corresponding interventions, smoking cessation, cholesterol reduction, and blood pressure management are cost effective both in primary and secondary prevention. For management of hypertension and hyperlipidemia, extensive trial and cost efficacy data enable a tiered approach based on baseline absolute risk. Several medications are also clearly beneficial and cost effective in secondary prevention. These include aspirin, beta blockers, and ACE inhibitors, which have a well-established benefit for select groups of individuals with existing CVD.

Class II interventions (Table 2) are those for which available (largely basic and human observational) data strongly indicate a causal relation and intervention is likely to reduce events, but for which data on the benefits, risks, and costs of intervention are limited. Class II factors that clearly increase risk of CHD include diabetes, low HDL and high triglyceride levels, obesity and physical inactivity, and menopause. Light to moderate alcohol consumption appears to reduce the risk of CHD. For several of these factors, trial data on interventions is forthcoming, such as hormone replacement therapy after menopause. For others, such as alcohol intake, there may never be data from large scale randomized trials. Despite the lack of trial data, these factors are very useful in assessing risk and attempts must be made to modify these risk factors in the primary and secondary prevention of heart disease. However, in the absence of extensive trial and cost effectiveness data, the ideal strategy to manage these modifiable risk factors remains unclear. Further, while, in principle, it makes sense to invest more resources in modifying these factors among those at highest risk, guidelines to modify these factors do not generally distinguish between high and low risk individuals.

Class III interventions (Table 3) are those currently under investigation. Many of these factors in this class data are not complete enough to infer an independent causal relationship with CHD. For others where causal relationships are apparent interventions are not yet available or widely tested. Thus, the utility of these factors in the assessment of risk or the prevention of CHD is uncertain. These include various dietary practices including consumption of dietary supplements, psychological factors, and novel biochemical and genetic markers.

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Table 1. Class I Risk Factors and Interventions in the Prevention of Cardiovascular Disease

FACTOR	Effect	Intervention	Comment
Primary and Secondary Prevention Risk Factors			
Smoking	2-3 fold increased risk	Smoking cessation with behavior and pharmacologic intervention	Smoking cessation results in a 60% reduction of CHD risk by 3 years and about half of that benefit occurs in the first 3-6 months after quitting. Interventions are cost-effective in both primary and secondary prevention.
Hypercholesterolemia	10% increase in serum cholesterol increases risk of CVD by 20-30%	Dietary changes, lipid-lowering medications	Reduction of serum cholesterol by 10% reduces CVD death by 10% and CVD events by 18%. Treatment for more than five years reduces CVD events by 25%. Extensive trial and cost-efficacy data support a tiered approach based on underlying risk.
Hypertension	7 mm Hg increase in BP over baseline increases risk of CVD by 27%	Lifestyle modifications, weight loss, limited alcohol intake, aerobic exercise and medications	A 5-6 mm Hg reduction in BP results in 42% reduction in risk of stroke and a 16% reduction in risk of CVD. Extensive trial and cost-efficacy data support a tiered approach based on underlying risk.
Pharmacologic Therapies			
Aspirin in secondary prevention	Reduces CVD events by 25%	Daily low dose aspirin	Reduces risk among those with any form of CVD.
Beta Blockers following MI	Reduces CVD events by 18%	Daily beta blocker use	Trial data suggests that the benefit may increase with increasing dose.
ACE inhibitors among those with low EF and following MI.	Reduces CVD events by 22% in those with low EF and by 7% following MI	Daily ACE inhibitor use	Trial data suggests that the benefit may increase with increasing dose.

Table 2. Class II Risk Factors and Interventions in the Prevention of Cardiovascular Disease

FACTOR	Effect	Intervention	Comment
Insulin-dependent diabetes	Increases risk 2-4 fold in men and 3-7 fold in women.	Maintaining normoglycemia with diet, exercise, weight management and insulin	Trial data strongly suggest that tight control with insulin reduces risk of microvascular disease and may reduce the risk of CVD events.
Non-insulin-dependent diabetes	Increases risk 2-4 fold in men and 3-7 fold in women.	Maintaining normoglycemia with diet, exercise, weight management, oral agents, and insulin as needed.	Tight control appears to reduce microvascular disease, but data on the risk of CHD are not available. Those with NIDDM are likely to have multiple coronary risk factors which should be aggressively modified.
Elevated fasting triglyceride levels and lower HDL levels	Increases risk	Diet, exercise and lipid lowering therapy	HDL and triglyceride measures are useful markers of CHD risk and limited trial data suggest intervention reduces risk.
Obesity and physical inactivity	Increases risk	Diet, exercise and weight management programs	In addition to improving other CVD risk factors, maintaining ideal body weight and a physically active lifestyle may reduce risk of MI as much as 50%, but trial data are limited.
Menopause	Increases risk	Hormone replacement therapy (HRT)	HRT in postmenopausal women may reduce risk of CVD by 40%-50%; however, risk of endometrial or breast cancer may increase. Trial data are limited.
Moderate alcohol intake (one drink per day)	Decreases risk of MI by 30-50%	Discussion of alcohol intake with all patients	The risk/benefit ratio for moderate alcohol consumption may vary widely by gender and based on underlying risk of CHD. Recommendations must be made individually with careful regard for conditions such as HTN, diabetes, liver disease, history of alcohol abuse, risk of breast cancer, etc.
Pharmacologic Therapies			
Aspirin in primary prevention	Pooled trial data in men suggest a 33% reduction in risk of first MI.	Daily or alternate day low dose aspirin.	Prophylactic aspirin use in older men, particularly with risk factors, may reduce risk of MI. Data among women are limited but forthcoming.

Table 3. Class III Factors and Interventions in the Prevention of Cardiovascular Disease

Category	Specific factors	Comment
Dietary Factors	Fruit and vegetable intake, type and amount of fat, type and amount of carbohydrate, fiber, trans-fatty acids, dietary antioxidants, dietary bioflavenoids, dietary folate, fish and fish oils, garlic, etc.	USDA recommends 5 servings of fruit and vegetables per day. Reduction in saturated and trans-fatty acid intake appears to be warranted.
Dietary Supplements	Multivitamins, antioxidant supplements, folate, B12, B6, fish oils, etc.	Randomized trials of antioxidant supplements have been disappointing. Randomized trial data on antioxidants and folate are forthcoming.
Psychological factors	Depression, lack of social support, stress, type A personality, etc.	Trials of antidepressants in secondary prevention are forthcoming.
Novel biochemical markers	Fibrinogen, homocysteine, LP(a), t-PA, von Willebrand factor, factor VII, C-reactive protein, soluble adhesion molecules (sICAM, sVCAM), antibodies to various infectious agents, measures of oxidative stress, etc.	Additional observational data are needed to clarify the role of these factors in clinical practice.
Genetic markers	LPL receptor, Factor V Liden, ACE, etc.	Potential genetic markers and therapies are emerging at a rapid rate.

Patient Satisfaction with VA Care: Perspectives from the 1998 Veterans Health Survey

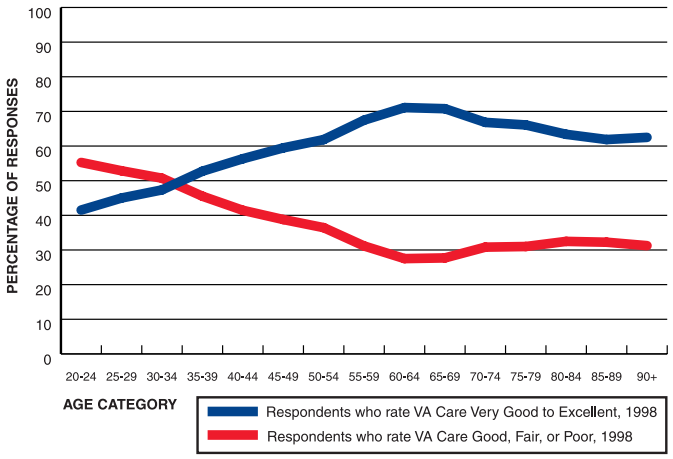
The 1998 Veterans Health Survey included a question which asked: "In general, how would you rate the overall health care received from your primary VA medical center?" Responses to this question provide a snapshot of patients' attitudes regarding VA care. Systemwide, 62.5% of veterans rated health care received as *Very Good* or *Excellent*, and an additional 22.7% rated it as *Good*. Only 11.6% rated health care received as *Fair* or *Poor*. With an approval rate of 62.5%, the prevailing attitude of veterans toward health care received can be described as *enthusiastically positive*.

The Survey also asked the respondent to indicate his/her age within a 5-year range. Comparing the age of the respondent to the satisfaction question response creates a very interesting pattern (see Table 1). The two lines in the Table chart the number of veterans holding this *enthusiastically positive* attitude toward VA care (ratings of *Very Good* or *Excellent*), against those holding a moderate to negative attitude (ratings of *Good, Fair* or *Poor*), plotted by the age of the respondent. Since the two numbers together include all respondent's answers (97.3% of all respondents answered this question), the lines are symmetrical.

Viewed in this manner, the resulting patient satisfaction data present a pattern not evident from the simple snapshot approach referred to above. Younger patients, up to the age of about 33, are increasingly less enthused about VA care in inverse proportion to age. Fewer than half of those in this age category rate VA care as *Very Good* or *Excellent*. On the other hand, after age 33 this measure of enthusiasm shows a steady rise to a crest of over 70% at about age 63. The rate then declines somewhat but still remains in excess of 60%.

These numbers tell us that the veterans least enthused about VHA health care are those who have served in the Gulf War and other recent theaters, while those most enthusiastic about it served during the Korean conflict or World War II. While these numbers do not explain why, they strongly suggest that increased efforts be made to enhance VA health care for this younger age group.

Table 1 - Veterans Health Survey 1998



The keenest veteran supporters are the approximately 55% of the national patient population base over the age of 60. The least inspired are the nearly 7% who are under age 35. Over time, this latter group will grow both in numbers and percentage of the VA patient population. It is vital therefore, that the VHA mission and continued operation deliver the kind of care that provokes the animated support of this younger age group.

Analysis for the 1999 Veterans Health Survey is currently underway. Reports of survey findings should reach the field by the end of July.

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Please consider publishing an article in *Prevention Notes*

Items can be sent on diskette (include hard copy) or via e-mail to

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Putting Prevention Into Practice in the VA